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[General publications]  
Newman, Minister  
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# THE HYDROLOGIC CYCLE

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UNIVERSITY OF TORONTO



Ontario

Ministry  
of the  
Environment

*[General publications]*

Hon. William G. Newman, Minister  
Everett Biggs, Deputy Minister

[G-93]

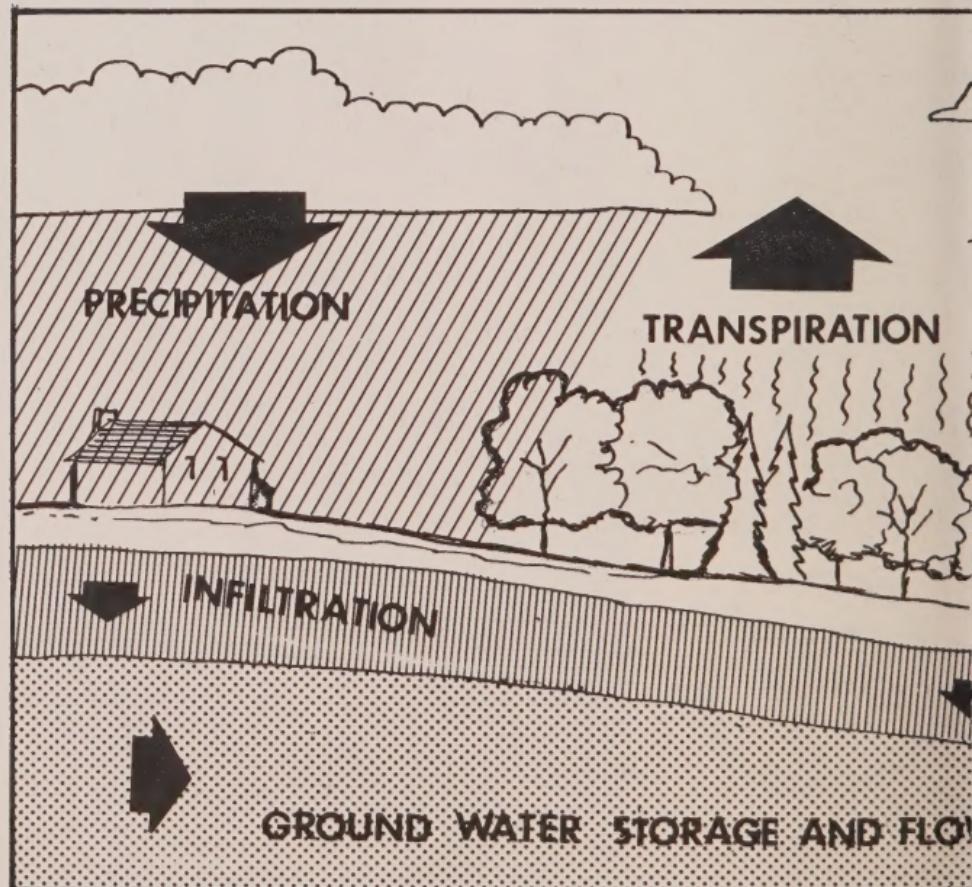
From the vast expanse of the ocean, the sun's energy evaporates water which rises as water vapour and condenses to form clouds of fresh water. The clouds move with the air currents in the atmosphere. As they become larger and heavier, droplets of water are formed which in time fall as rain, snow or hail, depending upon the time of year and the location. This falling moisture is called *precipitation*.

Over land areas the same thing occurs. Water is evaporated from lakes, rivers, streams and land surfaces into the atmosphere and forms more clouds. Most plants transpire or give off water to the atmosphere during the process of growth. This giving off of moisture by plants is called *transpiration*.

In short, evaporation of moisture from oceans, lakes, rivers, streams and land surfaces, and the transpiration of moisture from plants form the clouds, which eventually return this moisture to earth as precipitation.

The precipitation which returns to earth soaks into the ground or runs off into surface waterways. The water which soaks into the ground is used by plants for growth or joins the flow of water below the surface of the ground to eventually return to rivers, lakes and oceans. The water which soaks into the ground to the water table is called *ground water*, while the water which is visible upon the ground is called *surface water*.

All together, evaporation and transpiration forming the clouds, precipitation returning the water to earth, and the flow of water on the surface and underground forms a



cycle of water movement. This is called the water cycle or the hydrologic cycle.

The hydrologic cycle maintains and replenishes our ground-water supplies. When precipitation is below average shortages may occur where no provision has been made for storing water. When precipitation is excessive, floods usually result.

Conservation measures, such as the construction of dams and ponds are utilized to compensate for weather changes from season to season and year to year.

## WATER FACTS:

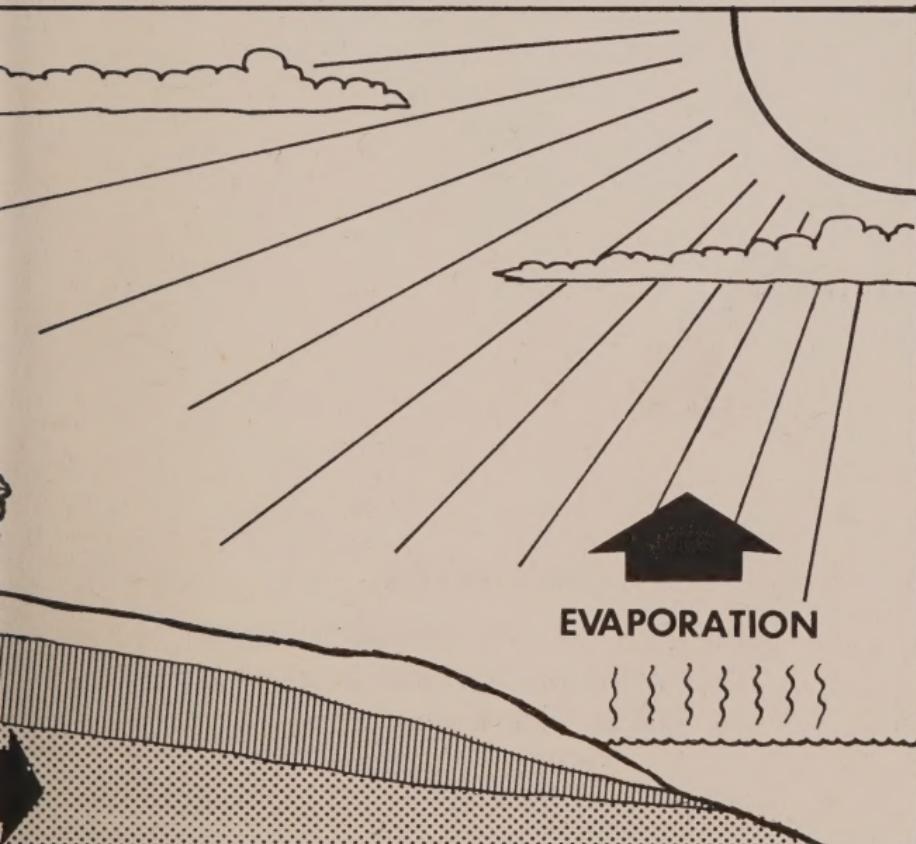
Ontario has a total area of 412,582 square miles, of which 68,490 square miles consists of fresh water lakes, rivers and streams.

Present day urban per capita water use amounts to 100 gallons per day.

Domestic water use:

Tub bath .....	30-40 gallons
Shower .....	20-30 gallons
Laundering .....	20-30 gallons
Rinsing .....	20-30 gallons
Dish-Washing .....	8-10 gallons
Toilet .....	3 gallons

A dripping faucet which leaks only one drop each second will waste 4 gallons a day. A leak in a toilet bowl may easily waste up to 36 gallons a day.



**ENQUIRIES:**  
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